

# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	F	ILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,405	09/939,405 08/27/2001		Kenneth Alan Pieroni	CHMP-102D	5474
21272	7590	07/27/2005		EXAMINER	
MORLAN		CHER	GARBER, CHARLES D		
2030 MAIN SUITE 1050			ART UNIT	PAPER NUMBER	
IRVINE, C	IRVINE, CA 92614			2856	
				DATE MAILED: 07/27/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

		AK
•	Application No.	Applicant(s)
	09/939,405	PIERONI ET AL.
Office Action Summary	Examiner	Art Unit
	Charles D. Garber	2856
The MAILING DATE of this communication a Period for Reply	appears on the cover sheet w	ith the correspondence address
A SHORTENED STATUTORY PERIOD FOR REF THE MAILING DATE OF THIS COMMUNICATION  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a construction of the provision of the prov	N. 1.136(a). In no event, however, may a reply within the statutory minimum of thir od will apply and will expire SIX (6) MOI tute, cause the application to become A	reply be timely filed ty (30) days will be considered timely. ITHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).
Status		•
Responsive to communication(s) filed on 15     This action is FINAL. 2b) □ T     Since this application is in condition for allow closed in accordance with the practice under	his action is non-final. wance except for formal mat	
Disposition of Claims		
4) ⊠ Claim(s) 11-18,29 and 32-34 is/are pending 4a) Of the above claim(s) 11-18 is/are withd 5) □ Claim(s) is/are allowed. 6) ⊠ Claim(s) 29 and 32-34 is/are rejected. 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and	rawn from consideration.	
Application Papers		
9) The specification is objected to by the Exam 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to t Replacement drawing sheet(s) including the cort 11) The oath or declaration is objected to by the	accepted or b) objected to the drawing(s) be held in abeya rection is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for fore a) All b) Some * c) None of:  1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the papplication from the International Bur * See the attached detailed Office action for a	ents have been received. ents have been received in A priority documents have been reau (PCT Rule 17.2(a)).	Application No received in this National Stage
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	· —	Summary (PTO-413) (s)/Mail Date
Information Disclosure Statement(s) (PTO-1449 or PTO/SB. Paper No(s)/Mail Date	a, □	Informal Patent Application (PTO-152)

Art Unit: 2856

#### **DETAILED ACTION**

## Response to Arguments

Applicant's arguments with respect to claims 29, 32-34 have been considered but are most in view of the new ground(s) of rejection.

### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westervelet et al. (US Patent 3,872,712) in view of Mieczkowski et al. (US Patent 5,898,108), Arnaud et al. (US Patent 4,198,374) and Gross (US Patent 5,275,144).

Regarding claims 29 and 32, Westervelt discloses a dynamic air flow comparator system that may be used for testing workpieces for leakage.

Art Unit: 2856

Workpieces may include "transmission housings, power cylinders, parts carrying seals or any of a wide variety of other items" according to Westervelt (Background), but not expressly testing fuel vapor recovery systems.

Mieczkowski teaches using a flow measurement device to test an evaporative emission system (including a fuel vapor recovery charcoal canister) for both proper purge flow as well as the system's ability to maintain pressure per EPA requirement (abstract and column 1 lines 35-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to test a fuel vapor recovery system for its ability to maintain pressure (e.g. against leaks) because this is an EPA requirement.

Westervelt further discloses alternatively connecting the workpiece 50 and reject calibration leak 35 (leak tolerance standard) to a pressure source at air supply inlet 36 and to flow sensors 17 and 62. Westervelt uses air (abstract) rather than an inert gas.

Mieczkowski teaches nitrogen is a suitable gas for pressuring a fuel vapor recovery system of a motor vehicle for leak testing (column 6 lines 60-61 and column 2 lines 14-18). Nitrogen is an inert gas.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to leak test using nitrogen, an inert gas, to pressurize a system under test as nitrogen is a "suitable" gas and will not react chemically with fuel vapors in the system being tested.

Art Unit: 2856

Westervelt further discloses flow sensor 62 is a visual flow indicator that may be used in conjunction with the automated test (using flow sensor 17) or independently if the user chooses to perform a manual test.

Westervelt also disloses the parts under test may be sealed or having fixed orifices (Background) but not expressly closing a vapor recovery system under test.

Mieczkowski only teaches closing the fuel tank and not expressly the vapor recovery canister.

Gross teaches the "invention checks the integrity of the evaporative emission control system [including a fuel tank and canister] by sealing the system from the atmosphere, applying a vacuum signal to the system and sensing the vacuum signal level at a predetermined point in the system. The system is sealed from the atmosphere by energizing the valve 46 thereby closing off the air input." Gross explains "These evaporative emission control systems are generally comprised of a combination of hoses, pipes and containments, such as the vapor collection canister and the fuel tank, connected with defined openings to the environment. Defects in such a system will typically show as a leak resulting from, for example, disconnected hoses or a loose or missing gas cap. Defects may further take the form of a restriction such as a pinched line."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to close an entire vapor recovery system including the canister because defects may occur at various connections within the system.

Westervelt further discloses the calibration circuit is employed at the end of each test (either automatically or manually) and therefore precedes any subsequent test which anticipates "disconnecting the gas supply line and... gas flow meter from the leak tolerance standard and reconnecting the gas supply line and... gas flow meter to" a workpiece as in the instant invention. Sequencing of the valves 56 and 33 switches supply pressure from the workpiece to the calibrated leaks.

Comparison of the calibration and workpiece leak flow rates is performed either automatically with comparator system 48 or manually using visual flow gauge 62 as an alterative to the red and green lamp signals (column 5 lines 24-26).

The gauge 62 is depicted in idealized form and Westervelt does not reveal specifically what type of visual gauge is used.

Arnaud teaches a flow meter 36 may be "a glass tube and ball flow meter of the well known variety...which permits the operator to visually monitor the flow" (column 10 lines 3-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made use a ball type flow valve as they are "well known" "which permits the operator to visually monitor the flow". Selecting a "well known" device for monitoring flow would allow it to be easily adapted for use in Westervelt's invention.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Westervelet et al. (US Patent 3,872,712) as modified by Mieczkowski et al. (US Patent 5,898,108), Arnaud et al. (US Patent 4,198,374) and Gross (US Patent 5,275,144) and applied to claim 29 above and further in view of Adams (US Patent 4,462,249).

Art Unit: 2856

The references lack the non-flammable gas is carbon dioxide.

Adams discloses a leak test device including cylinder 41 providing gas used to pressurize a tank during a leak test. Adams teaches the "gas cylinder preferably contains nitrogen it can also be any other inert gas such as carbon dioxide".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to pressurize a system with either nitrogen or carbon dioxide as both are inert and therefore will not react harmfully with the system or its contents.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westervelet et al. (US Patent 3,872,712) as modified by Mieczkowski et al. (US Patent 5,898,108), Arnaud et al. (US Patent 4,198,374) and Gross (US Patent 5,275,144) and applied to claim 29 above and further in view of Toback (US Patent 3,822,585).

The references lack the gas supply including a check valve in the supply line.

Toback teaches check valve 50 in line 51 from air source at 54.

This is done typically to maintain pressure if the source is disconnected or to prevent contamination of the source from backflow.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to dispose a check valve in the gas supply line in order to prevent backflow and thereby hold pressure and prevent contamination of the source.

#### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2856

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdg

CHARLES GARBER PRIMARY EXAMINER Page 8